

# DID YOU KNOW THAT...



**CQFA** CARREFOUR QUÉBÉCOIS  
DE LA FABRICATION ADDITIVE

## YOU SHOULD PROTECT YOUR ADDITIVE MANUFACTURING INNOVATIONS THROUGH INTELLECTUAL PROPERTY?

Companies are increasingly choosing additive manufacturing for its many economic and technical benefits. However, shifting to additive manufacturing requires more than just new equipment. The integration and use of this technology raises legal issues that must be considered, as additive manufacturing not only refers to the technology itself, but also to the materials and their characterization, quality management, artificial intelligence, etc. Intellectual property (IP) considers the entire value chain. Among other things, Lavery and its team of experts help companies navigate the many IP-related issues that surround additive manufacturing.



## DEMYSTIFYING INTELLECTUAL PROPERTY

IP protection is one of the few methods that can help companies limit competition for their technology, despite the generally limited duration of such protection. The objective is to gain a competitive advantage by limiting the competitor's ability to develop identical or similar technology. A number of strategic decisions must be made to implement any IP protection strategy. For example, companies keep their innovations secret, thereby creating a barrier to commercialization for their competitors. Alternatively, they also can choose to protect their technologies through patents that provide exclusive rights for a limited time, but this approach requires the disclosure of information that allows competitors to replicate their technology when the patent expires.

IP laws are designed to protect rights holders while simultaneously allowing and promoting public access to these innovations following a period of protection.

There are many forms of IP protection. Companies seeking to protect their innovations have a wide range of options for doing so. These include:

- Patents (competitive advantage on new and innovative features)
- Industrial design (competitive advantage on new visual aspects)
- Copyright (protection of a work, performance, sound recording or communication signal)
- Trade secrets (protection of secrets)

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The choice of the appropriate strategy depends on several factors, including the nature of the innovation one seeks to protect. Additive manufacturing patents are intended to protect the functionality of technological innovations (e.g., new mechanical parts, new computer features). Industrial design is used to protect the visual aspects of a finished product. Design protection should be considered in any additive manufacturing context, as structures that were once considered virtually impossible are quickly becoming possible. For its part, copyright can prevent the theft of source codes used to govern the behaviour of certain equipment. From a legal standpoint, these source codes are considered works. Finally, trade secrets protect any secret information that gives the company a competitive advantage. For example, trade secrets are often used to protect new materials, or the algorithm that governs tool and equipment use (e.g., speed management, nozzles). The goal is to prevent any disclosure of the company's "recipe."

The form of protection chosen depends on several factors, and which companies should consider carefully. A clear strategy and objective will help identify the best path to IP protection. Sometimes multiple forms of protection can be applied to the same project. For example, ULIO 3D protects its 3D printers with a trademark (ULIO 3D), an industrial design (visual aspects) and patents (functional aspects). Trade secrets are also used to protect embedded software (firmware) and other algorithms.

## CREATING A CULTURE OF INNOVATION

Companies must develop a culture of innovation within their teams. An innovation culture helps to clarify the importance of protecting innovations through project management tools, among other things. To achieve this, those whose work activities involve IP must be trained, while those who actively promote IP must be recognized for their efforts. Creating an innovation culture ensures that consistent messages are communicated throughout the company. As the saying goes, "culture eats strategy for breakfast."

Innovation management involves the following:

- Developing a culture of protection
- Implementing systematic processes to manage innovative projects
- Providing ongoing training for stakeholders
- Communicating consistent messages at every hierarchical level
- Recognizing individuals and their contributions

## INTELLECTUAL PROPERTY: A GROWING PRACTICE

Between 2017 and 2019, more than two out of three Quebec companies knew which IP rights were best suited to protect an invention, trademark, logo or creative work. In 2019, 32.5% of Quebec companies were aware of patents, while 32% of companies were aware of copyrights. In 2019, 24.8% of Quebec companies held IP rights, compared to 17.1% in Ontario, 11.2% in the Atlantic region and 16.4% in the rest of Canada.<sup>1</sup>

<sup>1</sup> Adjélé Latzey Wilson (2022). "La connaissance et l'utilisation de la propriété intellectuelle dans les entreprises au Québec entre 2017 et 2019". Science, technologie et innovation. Institut de la statistique du Québec.